

# **EXHIBIT I**

**IN THE UNITED STATES DISTRICT COURT  
FOR THE SOUTHERN DISTRICT OF NEW YORK**

IN RE GOOGLE DIGITAL ADVERTISING  
ANTITRUST LITIGATION

Case No. 1:21-md-3010 (PKC)

*This Document Relates to:*

IN RE GOOGLE DIGITAL PUBLISHER  
ANTITRUST LITIGATION

Case No. 1:21-cv-7034 (PKC)

**NAMED PUBLISHER PLAINTIFFS' FIFTH SET OF REQUESTS FOR ADMISSION  
TO DEFENDANTS GOOGLE LLC, ALPHABET, INC. AND YOUTUBE, LLC**

Pursuant to Federal Rule of Civil Procedure 36, Plaintiffs in the above-captioned matter, by their counsel, hereby serve this Fifth Set of Requests for Admission (“Requests”) upon Defendants Google LLC, Alphabet, Inc. and YouTube, LLC (“Defendants”) and request that Defendants answer each, under oath, within thirty (30) days.

Please note that the matters set forth herein will be deemed admitted unless within thirty (30) days of service of these Requests, Defendants serve upon Plaintiffs’ Counsel written answers or objections addressed to the matter and signed by Defendants or their attorneys.

**DEFINITIONS**

The definitions and rules of construction set forth in Rule 34 of the Federal Rules of Civil Procedure (“Federal Rules”) and Rule 26.3 of the Local Rules of the United States District Courts for the Southern and Eastern Districts of New York (“Local Rules”)—including, but not limited to, the definitions of “Documents” and “Person”—are hereby incorporated and apply to these Requests. These definitions apply throughout these Requests without regard to

capitalization. Plaintiffs reserve the right to deliver and serve additional Requests. In addition, as used in these Requests, the words set forth below shall be defined as follows:

1. “You,” “Your,” “Alphabet,” or “Google” shall mean Defendants Google LLC, Alphabet Inc., and YouTube, LLC and their past and present officers, employees, agents and representatives, parents and predecessors, divisions, subsidiaries, affiliates, partnerships and joint ventures. The terms subsidiary, affiliate, and joint venture refer to any firm in which there is total or partial ownership of twenty-five percent or more or total or partial control between the company and any other person or entity.

2. To bring within the scope of these Requests all information that might otherwise be construed to be outside of their scope, the following rules of construction apply: (i) the singular includes the plural and vice versa; (ii) the masculine, feminine, or neuter pronoun does not exclude other genders; (iii) the connectives “and” and “or” should be read either disjunctively or conjunctively as necessary to bring within the scope of the discovery request all responses that might otherwise be construed to be outside of its scope; (iv) the terms “any,” “all,” and “each” should be read to mean any and all; (v) the word “including” should be read to mean including, without limitation; (vi) the present tense should be construed to include the past tense and vice versa; (vii) references to employees, officers, directors, or agents include both current and former employees, officers, directors, and agents; and (viii) defined terms should be given their broadest meaning regardless of whether they are capitalized in these Requests.

### **INSTRUCTIONS**

1. For each numbered Request contained below, in the section titled “Requests for Admission,” you must admit or deny the statement or explain why the statement cannot be admitted or denied.

2. Unless otherwise specified, the information requested by this set of Requests shall include information within the knowledge or possession of any of Your agents, employees, attorneys, investigators, or any other Persons, firms, or entities directly or indirectly subject to Your control in any way whatsoever.

3. Each Request shall be answered in its entirety. If any Request or subsection thereof cannot be answered in full, it shall be answered to the fullest extent possible with an explanation as to why a complete answer is not provided.

4. Separate and complete responses (or, as the case may be, separate objections) are required for each Request or subpart thereof.

5. Unless otherwise instructed or clear from the context of the Request, these Requests seek responsive information concerning the period from January 1, 2007 to Present. Plaintiffs reserve the right to expand the time frame of these and any future Requests should the Court in this Action determine that the relevant time period for discovery exceeds the scope set forth herein.

6. If a claim of privilege is asserted in objecting to any Request or subpart thereof, and a full response is not provided on the basis of such assertions, you are directed to comply with all applicable rules, statutes and provisions regarding such Requests, including, but not limited to Fed. R. Civ. P. 26(b)(5) relating to, among other things, the identification, protection, and disclosure of the existence of such information. You are further directed to respond to any part of the request for admission which is not objectionable and furnish a statement of the claim of privilege and all facts relied upon in support thereof in the form of a log.

7. If you find the meaning of any term in any request for admission is unclear, without waiver of Plaintiffs' right to seek a full and compliant response to the request for

admission, you shall assume a reasonable meaning, state what the assumed meaning is, and respond to the request for admission according to the assumed meaning.

8. These Requests are continuing in nature and require supplemental or additional responses in accordance with Rule 26(e) of the Federal Rules of Civil Procedure.

### **REQUESTS FOR ADMISSION**

1. Google does business with online publishers throughout the United States.
2. The large number of online visitors to the Internet makes it an attractive forum for advertisers.
3. Before the Internet, companies wanting to advertise did so largely through billboards, newspapers, magazines, radio, and television.
4. The Internet allowed for more specific targeting of advertising to consumers, traits, interests, and demographics.
5. The Internet made it possible to target advertising with increasing specificity to specific consumers who are more likely to interact with the ads.
6. The Internet made it possible to increasingly target advertising to specific consumers who are more likely to buy the advertised products or services.
7. Search ads are only served to users after they have inputted a search query correlated with products, services, or information related to the ad.
8. Google has been the largest provider of online search advertising since at least 2005.
9. Google's revenue from online search advertising in 2020 exceeded \$44.5 billion.
10. Google made more than 90% of the sales of online search advertising in the United States in 2020.

11. Cost Per Mille, also known as CPM, is a measurement unit for display advertising pricing in which the price is expressed as the amount an advertiser pays per 1000 ad impressions.

12. Cost Per Click, also known as CPC, is a measurement unit for display advertising pricing in which the price is expressed as the amount an advertiser pays each time a user clicks on an ad.

13. Click Through Rate, also known as CTR, is the number of clicks divided by the number of impressions.

14. Predicted Click Through Rate, also known as pCTR, is a measure of the probability that a specific ad will be clicked when placed in a specific impression.

15. Cost Per Day, also known as CPD, is the amount an advertiser is charged daily by a sponsorship campaign, where a certain proportion of a publisher's inventory is guaranteed.

16. Cost per Action, also known as CPA, is a measurement unit for display advertising pricing in which the price is expressed as the amount the advertiser pays if an action, such as a product purchase or a registration for a service, results from a user's exposure to the display advertising.

17. Programmatic advertising refers to the automated process through which publishers sell space on their websites for the display of advertising to website users as opposed to through direct sales.

18. Exchange Bidding, also known internally as Exchange Bidding with Dynamic Allocation (EBDA), Project Jedi, or Demand Syndication, is an auction process developed by Google in 2016 that enables third-party Ad Exchanges to submit real time bids to publishers who use Google's Ad Server.

19. In September 2019, Google renamed Exchange Bidding as Open Bidding.

20. Google's acquisition of DoubleClick was announced in 2007 and the acquisition was completed in 2008.

21. Prior to the acquisition of DoubleClick, the internal code name at Google for its contemplated acquisition of DoubleClick was "Project Liberty".

22. Through the DoubleClick acquisition, Google acquired the product known as DART for Publishers, later re-named DoubleClick for Publishers ("DFP").

23. Through the DoubleClick acquisition, Google acquired the product known as DART for Advertisers, later re-named DoubleClick for Advertisers.

24. Prior to the DoubleClick acquisition, Google did not operate an Ad Exchange.

25. Through the DoubleClick acquisition, Google acquired the product known as DoubleClick Advertising Exchange, which would later form the basis of the Google Ad Exchange also known as "AdX."

26. DoubleClick for Publishers is a publisher ad-serving technology.

27. The DoubleClick products acquired by Google in 2007 formed the basis of Google's display ad tech offerings from 2007 through at least 2012.

28. In 2010, Google acquired Invite Media, whose technology formed the basis for the product known as DoubleClick Bid Manager or DBM.

29. DoubleClick Bid Manager was later rebranded as DV360.

30. Google acquired AdMeld, a provider of yield management products and services to publishers, in 2011.

31. Google acquired AdMob, a provider of mobile advertising products and services, in 2009.

32. The difference between search advertising and display advertising is described as follows in a February 2021 Google presentation to advertisers: “Search answers demand whereas Display generates demand.” GOOG-DOJ-AT-00330626 at -663.

33. One function of an Ad Server is identifying the availability of impressions for sale.

34. One function of an Ad Server is making one or more impressions available for sale to one or more sources of demand when a user loads a publisher’s webpage.

35. When an Ad Server makes impressions available for sale to more than one source of demand, one function of the Ad Server is selecting the winning demand source for each impression.

36. One function of an Ad Server is serving the ad from the winning demand source to the user.

37. One function of an Ad Server is to optimize revenues publishers earn for their display ad inventory.

38. One function of an Ad Server is to provide reporting to publishers regarding, among other things, information including revenues and other data related to the ad impressions sold on the publishers’ websites.

39. Ad Servers are tools for the benefit of publishers seeking to sell their display ad inventory.

40. Ad Buying Tools are software products that advertisers, including ad agencies, use to purchase digital advertising.



41. Publisher Ad Servers are products that provide the means for managing a publisher's ad inventory space and for determining which advertisements should be displayed on the publisher's website.

42. Advertisers must use Ad Buying Tools to bid for impressions on Ad Exchanges.

43. Advertisers must use Ad Buying Tools to bid for impressions on Ad Networks.

44. Ad Exchanges are products used by publishers to auction display ad inventory.

45. Google Display Network, also known as GDN, is Google's Ad Network, which buys ad impressions from publishers on behalf of advertisers who use Google Ads (formerly known as AdWords).

46. Google Ads, formerly known as AdWords, is one of Google's Ad Buying Tools.

47. Google routes the bids of its advertiser clients that use Google Ads to the Google Display Network.

48. Google's AdSense tool identifies the availability of impressions for sale on a participating publisher's page.

49. Google's AdSense tool makes one or more impressions on a participating publishers' page available for sale only to advertisers using GDN, DBM, and or the services of AdX Buyers.

50. Google's AdSense tool provides reporting to publishers on the ad impressions filled, including reporting the number of impressions, the number of clicks, and the revenues generated.

51. Google's AdSense tool serves ads to participating publishers' users.

52. There are two channels of display advertising: owned-and-operated platforms and open display advertising.

53. An owned-and-operated display advertising channel sells its own advertising inventory.

54. Examples of owned-and-operated channels are the ad impressions available on a social media platform (such as Facebook) or an e-commerce retailer (such as Amazon), which are sold directly to advertisers.

55. Ad Networks are generally utilized by smaller publishers and smaller advertisers than those that utilize Ad Exchanges.

56. High monthly impression requirements prevent small-size and medium-size publishers from selling impressions through Google's AdX product.

57. Google refers to the types of customers that license Ad Buying Tools for large advertisers as "large buyers" such as "agencies", "trading desks", and "large advertisers".

58. Ad Buying Tools for small advertisers, with low or no minimum monthly spending requirements, serve customers otherwise priced out of the more sophisticated Ad Buying Tools for large advertisers.

59. Google's internal sales training materials recognize that the set of customers served by Ad Buying Tools for small advertisers (such as Google Ads) are unique and distinct from the set of customers served by Google's Ad Buying Tools for large advertisers (such as DBM or DV360).

60. Since at least 2012, DoubleClick Bid Manager ("DBM"), later rebranded as DV360, has been Google's principal Ad Buying Tool for large advertisers.

61. By the second quarter of 2018, Google internal documents stated that its Ad Server products had a 99% tag penetration among large publishers. GOOG-TEX-01166094.

62. The following companies stopped marketing Publisher Ad Servers in the years after Google acquired DoubleClick and its Publisher Ad Server product, which would be marketed by Google as DoubleClick for Publishers: WPP, Microsoft, ValueClick, Yahoo!, Verizon (previously AOL), and OpenX.

63. OpenX and OAS were competitors of Google in the marketing of publisher ad servers, but no longer participate in that business.

64. The following companies stopped marketing alternatives to AdSense for small- and medium-sized publishers since 2010: Verizon (and/or its predecessor AOL), Yahoo!, and Microsoft.

65. Between 2009 and 2015, Google marketed DoubleClick for Publishers and AdX as separate products.

66. Beginning no later than August 2012, publishers could get access to real time, per query bidding on Google's Ad Exchange, AdX, only if they used Google's DFP.

67. Starting in 2014, Google merged its internal operations for DFP and AdX, under the internal name DRX.

68. In 2018, Google announced that the products previously marketed separately as DFP and AdX would be marketed as a single product, Google Ad Manager or GAM.

69. By in or about 2017, Google began asking publishers to sign a unified contract for DFP and AdX.

70. Google Ads prevents advertisers from accessing and taking data provided by Google Ads for use in another Ad Buying Tool.

71. From 2009 (when Google introduced AdX) to 2018 (when Google combined DFP and AdX into a single product), Google required publishers to use Google's Ad Server products in order to receive live, competitive bids from Google's Ad Exchange.

72. From 2009 to 2018, Google marketed its Ad Server and Ad Exchange products separately.

73. From 2009 to 2018, Google marketed to large publishers eligible for Ad Exchange participation an Ad Server, which was known as DoubleClick for Publishers (or DFP).

74. From 2009 to 2018, Google marketed to large publishers eligible for Ad Exchange participation an Ad Exchange (known as AdX).

75. From 2009 to 2018, AdX was the only Ad Exchange where publishers could access live, competitive bids from advertisers that used Google's Ad Buying Tool known as Google Ads.

76. According to a study by Google in 2013, receiving static bids from AdX instead of live, competitive bids could decrease publishers' revenues by a factor of 20% to 40%.

77. As the term is used at Google, "yield optimization" means obtaining the highest return for the publisher's ad impressions.

78. Google's Ad Server encrypts the user identifiers ("User IDs") that the DFP Ad Server assigned to publishers' users.

79. Prior to its purchase by Google, DoubleClick shared with publishers the User ID that it assigned to users.

80. During the Federal Trade Commission's consideration of Google's acquisition of DoubleClick, Google assured the FTC that Google was committed to the then-operative

approach of DoubleClick that the “data respecting users and competitive intermediaries collected by DoubleClick on behalf of its customers currently belongs to the publishers, not DoubleClick.”

81. In a statement concerning Google’s acquisition of DoubleClick, the Federal Trade Commission said, “the customer and competitor information that DoubleClick collects currently belongs to publishers, not DoubleClick.”

82. In 2007, David Drummond of Google testified to the U.S. Congress concerning the DoubleClick acquisition, and in discussing the “data that is collected in the process of advertising” (which necessarily includes User IDs), Mr. Drummond testified that Google had “no ownership of the data that comes with that that is collected in the process of the advertising.”

83. In 2007, David Drummond of Google testified to the U.S. Congress concerning the DoubleClick acquisition, and in discussing the “data that is collected in the process of advertising” (which necessarily includes User IDs), Mr. Drummond testified: “That data is owned by the customers, publishers and advertisers, and DoubleClick and Google cannot do anything with it.”

84. Publishers ordinarily use only one Ad Server product to sell programmatic display advertising.

85. Google is unaware of any significant number of publishers who use more than one Ad Server product to sell programmatic display advertising.

86. After Google acquired DoubleClick in 2009, Google began encrypting the User IDs that the DFP Ad Server assigned to publishers’ users.

87. From 2009 to 2015, AdX was the only Ad Exchange where publishers could access live, competitive bids from Google Display Network (also known as GDN).

88. From 2009 to 2015, GDN would only buy inventory that was offered through a Google-owned exchange or platform.

89. Until 2015, GDN bought inventory only from Google's AdSense or Google's Ad Exchange.

90. In 2015 GDN began buying inventory from non-Google exchanges only for advertisers making targeted "remarketing" advertisements.

91. "Remarketing" or "retargeting" refers to when advertisers target specific users that have already interacted with an advertiser's ad or website.

92. Remarketing only represents a small percentage of the total demand available through Google Display Network, at times as little as 5% by revenue.

93. When GDN buys inventory through AdX, it targets a 15% take rate.

94. When GDN buys inventory from third-party exchanges, it targets a take rate from 32% to 50%.

95. Until 2015, Google Display Network only purchased impressions that publishers made available through AdSense or AdX.

96. Starting in or about 2009, and continuing to 2015, Google Demand Network did not buy impressions from Ad Exchanges other than Google's Ad Exchange.

97. As late as February 2015, Google considered AWBid, its bidding tool that allowed the Google Display Network to purchase impressions from third-party exchanges, to be "experimental."

98. Publishers desire the ability to offer the same impression for sale in a manner that allows multiple sources of advertiser demand to submit bids concurrently.

99. Google marketed AdSense and the Google Display Network as separate products.

100. Publishers could not sell an impression through AdSense without soliciting a bid from the Google Display Network.

101. From 2007 until at least November 2023, Google charged a margin of at least 32% for selling impressions through AdSense.

102. When an advertiser purchased an impression from an AdSense publisher through DV360, Google charged an additional margin (above the standard 32% charged to publishers for using AdSense) associated with the advertiser's use of DV360.

103. Authorized Buyers are demand-side platforms and ad networks that took their own margins on advertiser bids before submitting them for auctions for impressions through AdX and AdSense.

104. Google operated a function known as "predicted click through rate" or pCTR, which was an algorithm that predicted the likelihood that a user would click a particular ad.

105. Google's pCTR function relied on inputs from advertisers using Google Ads as well as DoubleClick cookie data from the websites of publishers that used DFP and AdSense.

106. Google never offered Authorized Buyers access to the pCTR function.

107. Beginning in 2018, Google ceased allowing publishers to sell impressions via AdX unless they licensed Google's Ad Server through GAM.

108. After Google began requiring publishers to purchase both Google's Ad Exchange and Google's Ad Server as one product, publishers could only use AdX when they use DFP.

109. In January 2018, Google created a template e-mail to publishers that stated: "In order to continue using AdX and DFP, you will need to sign a new combined contract that includes terms for both products. This will replace your current individual AdX and DFP contracts."

110. By the end of February 2018, Google no longer offered publishers standalone AdX contracts.

111. By the end of May 2018, Google terminated any AdX-only accounts that had not signed a new GAM or DRX contract.

112. Before 2018, Google did not require publishers to license both DFP and AdX in order to use Google's Open Bidding service.

113. After 2018, Google required publishers to license both DFP and AdX in order to use Google's Open Bidding service.

114. After June 2018, if a publisher wanted to receive live, competitive bids from a multi-exchange/network auction in which AdX participates, Google required that publisher to use GAM.

115. In or around 2018, Google began submitting bids for inventory available through third-party ad servers through a program known as Demand Product or Project Yavin.

116. Google invited only a limited number of whitelisted publishers to sell through Demand Product.

117. Prior to the adoption of Header Bidding, in Google's waterfall system, only AdX was able to submit real-time bids.

118. Prior to the adoption of Header Bidding, Google's waterfall system routinely used historical average bid prices for third-party exchange bids.

119. Prior to the adoption of Header Bidding, in Google's waterfall system, Google's ad server did not request real time bids from third-party Ad Exchanges.



120. When it acquired DoubleClick, publishers using the DFP Ad Server offered their inventory to demand sources in a “waterfall” process, whereby the DFP Ad Server offered inventory to demand sources one-by-one in order of priority.

121. The DFP Ad Server uses “line items” as a way for publishers to represent and prioritize various sources of advertising demand.

122. Beginning in 2007, and continuing until at least 2019, Google’s publisher Ad Server began using a system called “Dynamic Allocation”.

123. Under Dynamic Allocation, the publisher Ad Server sent AdX the highest remnant line-item price to serve as the floor or reserve price in the AdX auction.

124. Under Dynamic Allocation, if Google’s AdX auction price beat the highest line item price, then AdX won the auction and placed the ad.

125. Under Dynamic Allocation, if Google’s AdX auction price equaled the highest line item price, then AdX won the auction and placed the ad.

126. Under Dynamic Allocation, other Ad Exchanges and Ad Networks were only permitted to run auctions among their advertisers if Google’s AdX failed to match the reserve price.

127. Under Dynamic Allocation, other Ad Exchanges and Ad Networks were only permitted to run auctions among their advertisers if Google’s AdX failed to exceed the reserve price by at least \$0.01.

128. Under Enhanced Dynamic Allocation, Google extended Dynamic Allocation to reservation line items.

129. Under Enhanced Dynamic Allocation, Google used the historic bid distribution of AdX bids for the publisher and the pacing of the reservation to calculate an “opportunity cost” for the reservation line item, also known as the EDA price.

130. Under Enhanced Dynamic Allocation, the publisher Ad Server sent the EDA price to serve as a floor in the AdX auction.

131. Under Enhanced Dynamic Allocation, if the EDA price was the highest floor in the ad server, and if Google’s AdX auction beat the EDA price, then AdX won the auction and placed the ad.

132. Under Enhanced Dynamic Allocation, if the EDA price was the highest floor in the ad server, and if Google’s AdX auction was equal to the EDA price, then AdX won the auction and placed the ad.

133. Under Enhanced Dynamic Allocation, the price of the reservation line item played no role in determining the EDA price.

134. Under Enhanced Dynamic Allocation, the highest remnant line item price was also allowed to compete for the reservation line item, but was only allowed to win on a probabilistic basis even if the highest remnant line item price was higher than the EDA price.

135. When Dynamic Allocation was first implemented, it provided an advantage to AdX by allowing AdX to submit a real time bid with knowledge of the highest remnant line item price.

136. When Dynamic Allocation was first implemented, it provided an advantage to AdX by allowing AdX to submit a real time bid while remnant line item prices from third party exchanges generally took the form of historical average bid prices

137. No other ad exchanges could use Dynamic Allocation or Enhanced Dynamic Allocation with DFP.

138. Google automatically enrolled publishers that used Google's DFP Ad Server in Enhanced Dynamic Allocation.

139. A user of Google Ad Manager could not turn off Enhanced Dynamic Allocation.

140. Header Bidding is a set of practices and software tools introduced in or about 2014 that permits access to real-time demand from multiple ad exchanges.

141. Through at least the third quarter of 2019, Dynamic Allocation or Enhanced Dynamic Allocation provided the highest remnant line-item price from the Ad Server, which could reflect the winning bid from the Header Bidding first price auction as the floor for the AdX second price auction.

142. DFP's waterfall auction was not a real time auction among multiple ad exchanges because DFP did not solicit real time bids from non-Google exchanges.

143. The DFP ad server allowed publishers to set a price floor that could serve as the minimum price at which an ad impression could be sold.

144. Google's unified pricing rules (also known as "UPR") required publishers to set the same price floor for all Ad Exchanges and Ad Networks bidding on a given impression.

145. Before Google's UPR came into effect, publishers had the capability to set different price floors for different Ad Exchanges and Ad Networks.

146. A result of UPR was that a seller could no longer set a price floor that was specific to a particular ad exchange or Ad Network.

147. Before UPR, publishers could set a different price floor for each buyer in AdX from the GAM interface.

148. After UPR a publisher could not set different price floors for different ad exchanges or ad networks.

149. Google's internal documents show that UPR had the effect of increasing spend on AdX.

150. Google's internal documents show that UPR had the effect of decreasing spend on third-party exchanges.

151. Sell-side Dynamic Revenue Share ("DRS") was launched in general availability in August 2015.

152. DRS v1 adjusted Google's share of AdX revenue downward so that the net bid (i.e., the bid submitted by the buyer minus the AdX revenue share) would be able to clear the AdX reserve price.

153. The impact of DRS was that more auctions were won by AdX.

154. Publishers were automatically enrolled in DRS v1 with no ability to opt-out.

155. When an auction cleared the reserve price because of the operation of DRS v1, the auction clearing price was equal to the price of the winning bid.

156. DRS v2 was launched in December 2016.

157. In DRS v2, the minimum revenue share applied was 0% and the maximum revenue share applied was 40%, but the objective was to keep the average revenue share at 20% over queries.

158. When an auction cleared the reserve price because of the operation of DRS v2, the auction clearing price was equal to the price of the winning bid.

159. Google told publishers that opting-out of DRS "reduces AdX yield."

160. "Truthful DRS" or tDRS was launched in July 2018.

161. tDRS adjusted AdX's revenue share before sending bid requests to AdX Buyers.
162. DRS dynamically adjusted Google's Ad Exchange take rate on an impression-by-impression basis to maximize the proportion of impressions Google's Ad Exchange would win.
163. All versions of DRS applied when the AdX auction reserve price was set by the EDA price calculated by Google.
164. All versions of DRS applied when the AdX auction reserve price was set by the remnant line-item price from the DFP Ad Server.
165. All versions of DRS applied when the AdX auction reserve price was set by a header bidding bid price from the DFP Ad Server.
166. All versions of DRS resulted in AdX winning impressions that might have otherwise been won by third party exchanges.
167. All versions of DRS resulted in the shifting of some impressions from third party exchanges to AdX.
168. More than 90% of publishers using AdX had DRS enabled.
169. From 2008 to 2019, GDN submitted two bids into AdX auctions for each impression that it bid on.
170. No non-Google AdX buyer was able to submit two bids for the same impression in AdX.
171. Project Bernanke launched in November 2013.
172. Project Bernanke increased the win rate for GDN on AdX.
173. Project Bernanke increased the amount of impressions won through the AdX auction.

174. Project Bell was an iteration of Project Bernanke which allowed GDN to alter its revenue share on a global basis across all AdX publishers.

175. Project Bell launched in August 2015.

176. Project Bell was named for Alexander Graham Bell, as a reference to GDN wanting publishers to give them the “first call.”

177. Project Bell v. 2 was an iteration of Project Bell which reduced bids for “mediating” or “multi-calling” publishers.

178. Project Bell v. 2 launched in October 2016.

179. Line items are a feature in Google’s Ad Server.

180. Google imposed limits on the number of line items that a publisher could use in Google’s Ad Server.

181. In order to use Header Bidding, publishers set up multiple line items in Google’s Ad Server.

182. Before 2018, Google’s DFP Ad Server provided auction records containing the data fields called Key Part and TimeUse2.

183. In or about 2018, Google began redacting the data fields Key Part and TimeUse2 in the records available to publishers.

184. The redaction of the data fields Key Part and TimeUse2 was at least partially motivated by Google’s desire to thwart publishers from evaluating the performance of third-party Ad Exchanges in Header Bidding.

185. Project Poirot launched in 2017.

186. One goal of Project Poirot was to decrease spend on exchanges that deviate from second pricing.

187. One goal of Project Poirot was to “to combat the effects of Header Bidding”.

188. The impact of Project Poirot was to decrease spend on third-party exchanges and increase spend on AdX.

189. In or about May 2019, Google recognized that Project Poirot increased AdX revenue by as much as 20 percent because of its effects shifting demand from other exchanges.

190. Google devised Project Elmo to help DV360 identify when it saw the same bid request across multiple Ad Exchanges.

191. The impact of Project Elmo was to decrease DV360 spend on certain third-party exchanges, including Pubmatic.

192. By March 2018, Project Elmo had increased DV360 spend on Google’s Ad Exchange by at least 7.8%.

193. Project Elmo was designed to “protec[t] against Header Bidding”.

194. In 2019, Google started to provide a field known as “minimum bid to win” to Authorized Buyers and Open Bidders that submit a valid bid into the auction.

195. In 2019, Google launched its unified, first-price auction.

196. The “minimum bid to win” field informs buyers the minimum value they would have had to bid to win that auction.

197. The rationale for sharing the “minimum bid to win” field was to assist bidders in training their bidding models in a first-price auction.

198. Smart Bidding was a bidding algorithm developed by Google.

199. Google developed Smart Bidding, in part, to “[m]itigate the downsides of losing last look”.

200. Smart Bidding used “minimum bid to win” data as one of the inputs in its algorithm.

201. Google Audiences are made up of segments, or groups of people with specific interests, intents, and demographic information, as estimated by Google.

202. Until at least 2020, Google provided GDN advertisers bidding on AdX with Google Audience data but did not provide Google Audience data to GDN advertisers bidding on third party exchanges through AwBid.

203. Until at least 2020, Google provided DBM/DV360 advertisers bidding on AdX with Google Audience data but did not provide Google Audience data to DBM/DV360 advertisers bidding on third party exchanges.

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**CERTIFICATE OF SERVICE**

I, Philip C. Korologos, hereby certify that on May 18, 2024, I caused a copy of Named Publisher Plaintiffs' Fifth Set of Requests for Admission to Defendants Google LLC, Alphabet, Inc., and YouTube, LLC to be served via email on counsel for Defendants:

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